

## CLAIM AMENDMENTS

1           1. (currently amended) An openable and closable  
2 umbrella that is used for protection against the weather, e.g. sun  
3 and/or rain, and where any rain water falling on it is deflected  
4 outward by a canopy, ~~characterized in that wherein arms (30) rods~~  
5 supporting the canopy ~~[(10)]~~ are wholly above the canopy ~~[(10)]~~  
6 and do not pass through the canopy ~~[(10)]~~.

1           2. (currently amended) ~~The umbrella according to claim~~  
2 ~~1, characterized in that the umbrella has~~ An umbrella comprising:  
3           a shaft ~~[(20)]~~ anchorable in or on the ground or in the  
4 air by an anchor ~~[(51)]~~ and defining an axis,  
5           a canopy ~~(10) that is in~~ movable between an unfolded open  
6 condition position in which it is wavy and a folded position  
7 inclined to the axis, made of a preferably nonstretching membrane  
8 or fabric, formed of a whole number of polygonal sections with  
9 outer corners ~~[(12)]~~ defining alternating high points ~~[(34)]~~  
10 and low points ~~[(35)]~~, centrally traversed at a center by the  
11 shaft ~~[(20)]~~, centrally axially slidable along the shaft a  
12 vertical umbrella axis (1) or preferably centrally fixed on the  
13 shaft ~~(20)~~, ~~movable from a closed folded position inclined to the~~  
14 ~~axis (1),~~ and having an outer edge ~~[(11)]~~, and  
15           ~~at least one arm (30)~~ an array of rods extending  
16 radially from and pivoted on the shaft ~~[(20)]~~ and extending in

17     [[an]] the open unfolded position from the shaft [[(20)]] to the  
18     corners [[(12)]] , the rods being wholly above the canopy and not  
19     passing through the canopy.

1             3. (currently amended) The umbrella according to claim  
2     ~~2, characterized in that~~ wherein the canopy [[(10)]] has an even  
3     number  $2n$  of high points [[(34)]] and low points [[(35)]] so it has  
4      $n$  high points [[(34)]] and  $n$  low points [[(34)]] that alternate at  
5     the edge [[(11)]] of the canopy [[(10)]] in the open position and  
6     that impart to the canopy [[(10)]] a wavy shape, the high points  
7     [[(34)]] tensioning the canopy [[(10)]] up and out and the low  
8     points [[(35)]] tensioning the canopy [[(10)]] down and out.

4 -- 6. (canceled)

1             7. (currently amended) The umbrella according to claim  
2     ~~2, characterized in that~~ wherein the canopy [[(10)]] has a  
3     predetermined number  $n$  of low points [[(35)]], the canopy [[(10)]]  
4     being drawn up to and geometrically intersecting the umbrella axis  
5     [[(1)]] at a center [[(13)]] so as to set a conical shape in the  
6     canopy [[(10)]].

8. (canceled)

1                   9. (currently amended) The umbrella according to claim  
2 ~~2, characterized in that~~ wherein the canopy [(10)] has a  
3 predetermined number n of edge rods [(15)], the edge rods being  
4 secured at spaced locations or along their entire length with the  
5 respective canopy edge [(11)] and being alternately inclined to  
6 impart a wavy shape to the canopy [(10)].

1                   10. (currently amended) The umbrella according to claim  
2 ~~2, characterized in that~~ wherein the canopy [(10)] is tensioned  
3 by a preferably elastic annularly closed canopy-edge bow [(16)],  
4 the edge bow [(16)] being secured at spaced locations or along  
5 its entire length with the canopy edge [(11)] and being  
6 oppositely inclined to impart a wavy shape to the canopy [(10)].

11. (canceled)

1                   12. (currently amended) The umbrella according to claim  
2 ~~2, characterized in that~~ wherein the canopy [(10)] is ~~also~~ [(also)]  
3 secured at the center [(13)] to the shaft [(20)] or to a sleeve  
4 [(25)], the shape of the canopy [(10)] being variable by  
5 changing the axial position along the shaft [(20)] of the center  
6 [(13)] and/or of the sleeve [(25)].

1                   13. (currently amended) The umbrella according to claim  
2 ~~2, characterized in that~~ wherein in the open position the canopy

3     [[ (10) ]] is freely shiftable ~~at the shaft (20)~~ along the shaft  
4     [[ (20) ]] according to how much the canopy [[ (10) ]] is tensioned,  
5     the canopy [[ (10) ]] being sealed at the center [[ (13) ]] to the  
6     shaft ~~(20) and/or to the sleeve (25)~~.

1             14. (currently amended) The umbrella according to claim  
2     ~~2, characterized in that~~ wherein in the open position the canopy  
3     [[ (10) ]] is freely shiftable at the shaft [[ (20) ]] along the shaft  
4     according to how much the canopy [[ (10) ]] is tensioned, the canopy  
5     [[ (10) ]] being so cut out or constructed at the center [[ (13) ]]  
6     that it lightly touches or freely surrounds the shaft ~~(20)~~ ~~and/or~~  
7     ~~the sleeve (25)~~.

15. (canceled)

1             16. (currently amended) The umbrella according to claim  
2     ~~2, characterized in that~~ wherein a line in the canopy [[ (10) ]]  
3     between a corner [[ (12) ]] and the umbrella axis [[ (1) ]] is ~~due to~~  
4     provided with a sewn-in strap or cable that is [[ , ]] straight when  
5     the canopy [[ (10) ]] is under not excessive tension, so that the  
6     canopy [[ (10) ]] forms a fold along the line between the corner  
7     [[ (12) ]] and the umbrella axis [[ (1) ]].

1             17. (currently amended) The umbrella according to claim  
2     ~~2, characterized in that~~ further comprising

3           a line in the canopy  $[(10)]$  between a corner  $[(12)]$   
4   and the umbrella axis  $[(1)]$  is, due to a sewn-in strap or cable,  
5   arcuate when the canopy  $[(10)]$  is under not excessive tension, so  
6   that the canopy  $[(10)]$  forms a fold along the line between the  
7   corner  $[(12)]$  and the umbrella axis  $[(1)]$ .

18 -- 19. (canceled)

1           20. (currently amended) The umbrella according to claim  
2   ~~2, characterized in that wherein~~ in the open position of the  
3   umbrella, longitudinal axes of the upper arm ~~(31)~~ rods intersect  
4   the umbrella axis  $[(1)]$  at an upper common point and ~~[[the]]~~  
5   longitudinal axes of the lower arm ~~(32)~~ rods intersect the umbrella  
6   axis  $[(1)]$  at ~~another~~ a lower common point below the upper common  
7   point ~~, the longitudinal axes of the upper arm (31) and of the~~  
8   ~~lower arm (32) intersecting the umbrella axis (1) at different~~  
9   ~~common points.~~

1           21. (currently amended) The umbrella according to claim  
2   ~~2, characterized in that wherein~~ in the open position of the  
3   umbrella some or all of the arms ~~(30)~~ rods are tensioned upward  
4   into positions necessary for the open position by respective cables  
5    $[(40)]$  extending between outer ends  $[(33)]$  and the shaft  
6    $[(20)]$ .

1                   22. (currently amended) The umbrella according to claim  
2 ~~2, characterized in that wherein~~ in the open position of the  
3 umbrella some or all of the ~~arms-(30)~~ rods are tensioned upward  
4 into positions necessary for the open position by diagonal  
5 spreaders ~~[[43]]~~ that extend under tension or compression and are  
6 preferably pivoted between the ~~arms-(30)~~ rods and the shaft  
7 ~~[[20]]~~.

23 -- 24. (canceled)

1                   25. (currently amended) The umbrella according to claim  
2 ~~2, characterized in that wherein~~ in the open position of the  
3 umbrella some or all of the ~~arms-(30)~~ rods are tensioned downward  
4 into positions necessary for the open position by diagonal  
5 spreaders ~~[[43]]~~ that extend under tension or compression and are  
6 preferably pivoted between the ~~arms-(30)~~ rods and the shaft  
7 ~~[[20]]~~.

26. (canceled)

1                   27. (currently amended) The umbrella according to claim  
2 ~~2, characterized in that wherein~~ the umbrella is opened by an  
3 opening and closing mechanism having a sleeve ~~[[25]]~~ or shiftable  
4 telescoping shaft tip ~~[[21]]~~ on which all the ~~arms-(30)~~ rods are  
5 pivoted, and that can move downward along the umbrella axis ~~[[1]]~~

6 so that all the ~~arms-(30)~~ rods and the canopy  $[(10)]$  mounted on  
7 these ~~arms-(30)~~ rods are pushed or pulled by cables  $[(40)]$  and/or  
8 diagonal spreaders  $[(43)]$  into positions necessary for the open  
9 position until the canopy  $[(10)]$  is fully tensioned and the  
10 entire system assumes a stable position as a result of limits  
11 established by the static properties and geometry of the canopy  
12 ~~(10) or its parts, in particular the canopy edge~~  $[(11)]$ , the edge  
13 rods  $[(15)]$ , the edge bow  $[(16)]$ , or the edge cables  $[(14)]$   
14 ~~[[and/]]~~ or by the cables  $[(40)]$  or diagonal spreaders  $[(43)]$ .

28 -- 32. (canceled)

1 33. (currently amended) The umbrella according to claim  
2 ~~2, characterized in that wherein~~ the sum of the lengths  $a$  of the  
3 ~~arms-(30)~~ rods measured from the shaft  $[(20)]$  where they engage  
4 the respective diagonal spreaders  $[(43)]$  and the lengths  $d$  of the  
5 diagonal spreaders  $[(43)]$  is the same for all arms, where  $a + d =$   
6 constant so that in particular umbrellas with upper ~~arm-(31)~~ rods  
7 and lower ~~arm-(32)~~ rods can be completely folded together.

1 34. (currently amended) The umbrella according to claim  
2 ~~2, characterized in that wherein~~ the umbrella is closed by an  
3 opening and closing mechanism where all the ~~arms-(30)~~ rods and the  
4 canopy  $[(10)]$  are secured at the center  $[(13)]$  to a common  
5 sleeve  $[(25)]$  so that lifting of the sleeve  $[(25)]$  raises the

6 center [(13)] and the canopy [(10)] assumes a closed position  
7 folded together at the center.

35 -- 37. (canceled)

1 38. (new) An openable and closable umbrella for  
2 protection against sun and rain, the umbrella comprising:

3 a shaft anchorable in or on the ground or in the air by  
4 an anchor and defining an upright axis;

5 a canopy movable between an open unfolded position in  
6 which it is wavy and a folded closed condition inclined to the  
7 axis, made of a preferably nonstretching membrane or fabric, formed  
8 of a whole number of polygonal sections with corners defining  
9 alternating high points and low points, centrally traversed by the  
10 shaft, centrally axially slidable along or fixed on the shaft, and  
11 having an outer edge, the canopy being oriented such that in the  
12 open position water falling on it flows to the outer edge, the  
13 canopy forming between two adjacent sections an open gap;

14 a cable extending from corner to corner across the gap;  
15 and

16 an array of rods extending radially from and pivoted on  
17 the shaft and extending in the open position from the shaft to the  
18 corners of the sections, the rods being wholly above the canopy and  
19 not passing through the canopy.



1                   39. (new) An openable and closable umbrella for  
2 protection against sun and rain, the umbrella comprising:

3                   a shaft supported from above and defining an upright  
4 axis;

5                   a canopy movable between an open unfolded position in  
6 which it is wavy and a folded closed condition inclined to the  
7 axis, having a closed center below a lower end of the shaft, made  
8 of a preferably nonstretching membrane or fabric, formed of a whole  
9 number of polygonal sections with corners defining alternating high  
10 points and low points, centrally traversed by the shaft, centrally  
11 axially slidable along or fixed on the shaft, and having an outer  
12 edge, the canopy being oriented such that in the open position  
13 water falling on it flows to the outer edge; and

14                  an array of rods extending radially from and pivoted on  
15 the shaft and extending in the open position from the shaft to the  
16 corners of the sections, the rods being wholly above the canopy and  
17 not passing through the canopy.